Amendments to the Claims

Cancel Claims 1-6.

Claim 7 (currently amended): An exchange device comprising:

one or more thermoplastic hollow conduits fused at a first end portion of the thermoplastic hollow conduits to a first thermoplastic resin; said first thermoplastic resin fused to one or more structures interconnected by slots on an interior surface of a first sleeve or to a first end of a thermoplastic housing in a terminal end block structure; and

a second end portion of the thermoplastic hollow conduits fused at a second end portion with a second thermoplastic resin; said second thermoplastic resin fused to one or more structures interconnected by slots on an interior surface of a second sleeve or to a second end of the thermoplastic housing in a terminal end block structure.

Claim 8 (original): The exchange device of claim 7 where the structures are protrusions, grooves, or a combination of these.

Claim 9 (original): The exchange device of claim 7 where the structures are grooves in the surface of the housing or sleeves.

Claim 10 (currently amended): The exchange device of claim 7 ~~having~~ wherein the device further comprises a sintered thermoplastic coating on the inside of the sleeve or housing.

Claim 11 (original): The exchange device of claim 7 wherein said housing or sleeve includes fluid fittings.

Claim 12 (currently amended): The exchange device of claim 9 having two or more grooves in the housing or sleeves [[that]] wherein said grooves are interconnected by vent channels.

Claim 13 (currently amended): The exchange device of claim 7 wherein the thermoplastic hollow conduits are porous hollow fibers, skinned hollow fibers, ~~thermoplastic conduits,~~ co-extruded hollow conduits, or combinations of these.

Claim 14 (currently amended): The exchange device of claim 7 wherein the ends of the thermoplastic hollow conduits are opened to fluid flow.

Claim 15 (currently amended): The exchange device of claim 7 wherein the thermoplastic hollow conduits include a perfluorinated thermoplastic.

Claim 16 (currently amended): An exchange device comprising:

one or more co-extruded thermoplastic hollow conduits fused at a first end portion of the thermoplastic hollow conduits to a first thermoplastic resin; said first thermoplastic resin fused to a surface of a first sleeve or to a surface of a first end of a thermoplastic housing in a terminal end block structure; and

a second end portion of the one or more co-extruded thermoplastic hollow conduits fused with a second thermoplastic resin; said second thermoplastic resin fused to a surface of a second sleeve or to a surface of a second end of the thermoplastic housing in a terminal end block structure.

Claim 17 (currently amended): The exchange device of claim 16 wherein the ends of the co-extruded thermoplastic hollow conduits of the terminal end block structure are opened to fluid flow.

Claim 18 (original): The exchange device of claim 16 wherein said housing or sleeve includes fluid fittings.

Claim 19 (currently amended): The exchange ~~apparatus~~ device of claim 16 where [[the]] an outer layer of the co-extruded thermoplastic hollow conduits includes a thermally conductive material.

Claim 20 (currently amended): The exchange apparatus of claim [[20]] 16 where the co-extruded thermoplastic hollow conduits have an inner thermoplastic layer thermally bonded to an ~~inner layers~~ outer thermoplastic layer, the outer thermoplastic layer fusing with [[a]] said first or second thermoplastic resin in the exchange device.

Claim 21 (currently amended): A method of treating a fluid comprising:

flowing a first fluid to be treated on a first side of one or more thermoplastic hollow conduits in an exchange device of claim 7 or claim 16, ~~the hollow conduits fused at a first end portion of the conduits to a thermoplastic resin; the thermoplastic resin fused to one or more structures on an interior surface of a first sleeve or to a first end of thermoplastic housing and where a second end portion of the thermoplastic hollow conduits is fused with a thermoplastic resin; the thermoplastic resin fused to one or more structures on an interior surface of a second sleeve or to a second end of the thermoplastic housing;~~ and

flowing an ~~exchange~~ second fluid on a second side of the thermoplastic hollow conduits in the exchange device of claim7 or claim 16 to transfer mass, energy, or a combination of these is between the first fluid and the second ~~fluids~~ fluid through a wall between [[the]] a first side and a second side of the thermoplastic hollow conduits.

Claim 22 (currently amended): The method of claim 21 wherein thermal energy is transferred between the first fluid and the second fluid.

Claim 23 (currently amended): The method of claim 21 wherein said wall between the first side and the second side of the thermoplastic hollow conduits [[wall]] is non-porous.

Claim 24 (currently amended): The method of claim 21 wherein ~~the grooves are interconnected by vent slots~~ said wall between the first side and second side of the thermoplastic hollow conduits is porous.

Claim 25 (currently amended): An apparatus comprising:

an exchange device claim 7 or claim 16; ~~having one or more thermoplastic hollow conduits fused at a first end portion of the conduits to a thermoplastic resin; said thermoplastic resin fused to one or more structures on an interior surface of a first sleeve or to a first end of thermoplastic housing ; and a second end portion of the thermoplastic hollow conduits fused with a thermoplastic resin; said thermoplastic resin fused to one or more structures on an interior surface of a second sleeve or to a second end of the thermoplastic housing.~~ and

a source of exchange fluid connected to a first fluid inlet of the exchange ~~apparatus~~ device and a source of process fluid connected to a second fluid inlet of the exchange ~~apparatus~~ device, the first and second fluid inlets separated by the thermoplastic hollow ~~tubing~~ conduits, and a fluid controller fluidly connected to an ~~exchanger~~ a second fluid outlet in fluid communication with the second fluid inlet, the fluid controller ~~providing~~ provides conditioned fluid to one or more substrates ~~to be~~ treated by the apparatus.

Claim 26 (currently amended): The apparatus of claim 25 wherein the ~~exchanger~~ second fluid outlet in fluid communication with the second fluid inlet provides conditioned fluid to a tank containing one or more substrates.

Claim 27 (original): The apparatus of claim 25 wherein the fluid controller is a pump, a dispense pump, or a liquid flow controller.

Claim 28 (original): The apparatus of claim 25 wherein the exchange fluid is a source of temperature controlled fluid.

Claim 29 (original): The apparatus of claim 25 wherein the substrate to be treated includes silicon.

Claim 30 (currently amended): An exchange device comprising:

potted thermoplastic hollow conduits in a housing ~~capable of transferring~~ that transfer heat from a first fluid to a second fluid through the walls of the potted thermoplastic hollow conduits, the exchange device is integral at a temperature of at least 100 °C and a pressure of at least 50 psig, the potted thermoplastic hollow conduits having a packing density by volume of the potted thermoplastic hollow conduits in the housing of from between 20 and 70 percent[[,]] .

Claim 31 (currently amended): The exchange device of claim 30 with potted thermoplastic hollow conduits having 9 ft^2 (0.85 m^2) of exchange surface area, the exchange device ~~capable of exchanging~~ exchanges at least ~~about~~ 13,000 watts of energy between a first

fluid flowing on a first side of the potted thermoplastic hollow conduits ~~with~~ and a second fluid flowing on a second side of the potted thermoplastic hollow conduits.

Claim 32 (currently amended): The device of claim 31 where the first fluid flows at a rate of 9.5 liters per minute or less on a first side of the potted thermoplastic hollow conduits and the second fluid flows at a rate of 5.8 liters per minute or less on the second side of the potted thermoplastic hollow conduits.

Claim 33 (original): The exchange device of claim 30 where the device is integral at a temperature of 160 °C and a pressure of 70 psig.

Claim 34 (currently amended): The exchange device of claim 30 where the device is integral at a temperature of 200 °C and a pressure of 50 psig.

Claim 35 (original): The exchange device of claim 30 where the device includes co-extruded perfluorinated hollow conduits.

Claim 36 (original): The exchange device of claim 30 where the hollow conduits are made from perfluorinated thermoplastics.